

Syllabus - Applied Statistics for Education & Psychology I

Course: Applied Statistics for Education & Psychology I (Advanced Independent Study)

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Course Statistics Page: <http://www.pindling.org/Math/Statistics1>

Resources delivery through Webpage above: Stream Lectures, Examples, Alternate Online Textbook, Statistical Tools, Project Submission, and Grading. Streamed tutorial on SPSS and Stats4U.

Introduction: This is an online one-semester graduate statistics course for students in leadership, education, psychology, and social science. The emphasis is on statistics for research: organizing, condensing, and analyzing numerical data. It covers both descriptive and inferential statistics. This course uses SPSS or Stats4U (free downloadable statistics software).

Textbook: Hinkle D. E., Wiersma, W. and Jurs. S. G. (2003). *Applied Statistics for the Behavioral Science*, (5th Ed.) Boston, MA: Houghton Mifflin Company.

Pindling, C. A. (2007). *Tony's Research*, (1st Ed.), MI: Andrews University Press

Recommended: Green, S. B. & Salkind, (2003). *Using SPSS for Windows and Mackintosh: Analyzing and understanding data*. Upper Saddle River; NJ: Prentice Hall (optional).

Software: SPSS version 13.0 or higher and a Scientific Calculator with statistical functions.

Overview: scales of measurements, frequency distribution, central tendency, variability, standard normal distribution, normal curve, correlation, hypothesis testing, one-sample case for mean, two-sample case for independent means, two-sample case for independent variance, two-sample case for dependent means, one-sample case for correlation, linear regression, chi-square analysis (intro to non-parametric tests), and reporting statistics results in APA.

Course Evaluation:

1. Weekly Assignments	25%
2. Project 1	25% (Descriptive Statistics)
3. Project 2	25% (Inferential Statistics)
4. Weekly Discussions/Summary	10% (minimum 3 weekly meaningful postings)
5. Two-Hypotheses Journal Report	15%

Classroom Pedagogy: Statistics topic lectures, demo and tutorial on SPSS and statistical tools; online workshops discussions and feedback on workshop assignments after graded. Projects and a report that measure: statistical skills, applications of statistics, summaries of statistical results (APA style), and statistical decision making.

Online Resources: Tony's Research version 2.0, Stats4U Software, Streamed Lectures, and Other Educational and Assessment Resource (working on SPSS web access by students).

Notes: 1. Requirements: Internet Explorer, MS Office, Adobe Reader, Internet Assess
2. All projects and reports must conform to APA style for reporting statistics results.
3. Free Statistics Software (max $N = 500$)